

SEQUENCE LISTING

Sub
B2
<110> Vogels, Ronald
Bout, Abraham

<120> PACKAGING SYSTEMS FOR HUMAN RECOMBINANT ADENOVIRUS TO
BE USED IN GENE THERAPY

<130> 4075US

<140>

<141>

<150> 09/065,752

<151> 1998-04-24

<160> 69

<170> PatentIn Ver. 2.0

<210> 1

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: blunt,
double-stranded oligo-linker containing a PacI
site.

<400> 1

aattgtctta attaaccgct taa

23

<210> 2

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide used to create oligo-linker of
SEQ. ID. NO.: 1.

<400> 2

aattgtctta attaaccgc

19

<210> 3

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide used to create oligo-linker of
SEQ. ID. NO.: 1.

<400> 3

aattgcggtt aattaagac

19

<210> 4

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer LTR-1.

<400> 4

ctgtacgtac cagtgcactg gcctaggcat ggaaaaatac ataactg

47

<210> 5

<211> 64

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer LTR-2.

<400> 5

gcggatcctt cgaaccatgg taagcttggc accgctagcg ttaaccgggc gactcagtca 60
atcg 64

<210> 6

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer HSA1.

<400> 6

gcgccaccat gggcagagcg atggtggc

28

<210> 7

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer HSA2.

<400> 7

gttagatcta agcttgctga catcgatcta ctaacagtag agatgtagaa

50

<210> 8

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer used to
amplify a sequence corresponding to sequences
28511 to 28734 in wt Ad5 DNA.

<400> 8

gggtattagg ccaaaggcgc a

21

09332803 "061459
654790" E082EE60

<210> 9

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer used to
amplify a sequence corresponding to sequences
28511 to 28734 in wt Ad5 DNA.

<400> 9

gatcccatgg aagcttgggt ggcgaccca gcg

33

<210> 10

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer used to
amplify a sequence corresponding to sequences
29217 to 29476 in wt Ad5 DNA.

<400> 10

gatcccatgg ggatccttta ctaagttaca aagcta

36

<210> 11

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer used to
amplify a sequence corresponding to sequences
29217 to 29476 in wt Ad5 DNA.

<400> 11

gtcgctgtag ttggactgg

19

<210> 12

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer used to
generate 695 bp PCR product and plasmid construct
of of Example 2.

<400> 12

cgataagctt aattcctttg tgttt

25

<210> 13

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer used to
generate 695 bp PCR product and plasmid construct
of of Example 2.

<400> 13

cttaggtaac ccagtagatc cagaggagtt cat

33

<210> 14

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
single-stranded DNA molecule containing the HP/asp
sequence.

<400> 14

gtacactgac ctagtgccgc ccgggcaaag cccgggcggc actag

45

<210> 15

<211> 63

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer
PolyL-ITR.

<400> 15

aactgcagat ctatcgatac tagtcaattg ctcgagtcta gactacgtca cccgccccgt 60
tcc 63

<210> 16

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer
ITR-BSN.

<400> 16

cgggatccgt cgacgcggcc gcatcatcaa taatatacc 39

<210> 17

<211> 10

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nucleotide
sequence used to ligate 6354 bp blunt fragment to
a phosphorylated NsiI linker.

<400> 17

cgatgcacg 10

<210> 18

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer used in
PCR reaction performed on pMLP.nlsLacZ template.

<400> 18

ggggtggcca ggggtacctct aggccttttgc aa

32

<210> 19

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer used in
PCR reaction performed on pMLP.nlsLacZ template.

<400> 19

gggggggatcc ataaacaagt tcagaatcc

29

<210> 20

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide used to create a synthetic linker
with HindIII and XbaI overhang.

<400> 20

agcttgaatt cccgggtacc t

21

<210> 21

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide used to create a synthetic linker
with HindIII and XbaI overhang.

<400> 21

ctagaggtac ccggaattc a

21

<210> 22

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

ITR-EPH.

<400> 22

cggaattctt aattaagtta acatcatcaa taatatacc

39

<210> 23

<211> 66

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

ITR-pIX.

<400> 23

acggcgcgcc ttaagccacg cccacacatt tcagtagta ctagtctacg tcacccgccc 60

cgttcc

66

<210> 24

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

Ad3'/Forw.

<400> 24

cggaattcat caggataggg cggtgg

26

053607

053607

[illegible]

05363078

[illegible][illegible]

053607-1

[illegible]

053607 0-9

[illegible][illegible]

053607

0536079

[illegible]

053607

053037

0536798-1

[illegible][illegible]

D-307

[illegible]

0536978

053607

[illegible]

<220>

<223> Description of Artificial Sequence: primer

PA-pIX2.

<400> 27

ttaagccacg cccacacatt tcagtacgta ctagtggctt aat

43

<210> 28

<211> 10

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide used to create a linker with a
SalI site and EcoRI overhang.

<400> 28

ttaagtcgac

10

<210> 29

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: linker used to
change the EcoRI site in pAd5/Clip to a PacI site.

<400> 29

aattgtctta attaaccgca att

23

<210> 30

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide PLL-1 annealed to oligonucleotide
of SEQ. ID. NO.: 31 to create a linker used in
generation of AdMire plasmid.

<400> 30

gccatcccta ggaagcttgg taccggtgaa ttcgctagcg ttaacggatc ctctagacga 60
gatctgg 67

<210> 31

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide PLL-1 annealed to oligonucleotide
of SEQ. ID. NO.: 31 to create a linker used in
generation of AdMire plasmid.

<400> 31

ccagatctcg tctagaggat ccgttaacgc tagcgaattc accggtacca agcttcctag 60

ggatggc

67

<210> 32

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

CMVplus.

<400> 32

gatcgggtacc actgcagtgg tcaatattgg ccattagcc

39

<210> 33

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

CMVminA.

<400> 33

gatcaagctt ccaatgcacc gttcccggc

29

664790" E082EE60

<210> 34
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer
(Delta)DE2A.SnaBI.

<400> 34
ggcgtacgta gccctgtcga aag 23

<210> 35
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer
(Delta)DE2A.DBP-start.

<400> 35
ccaatgcatt cgaagtactt ccttctccta taggc 35

<210> 36
<211> 22
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

(Delta)DE2A.DBP-stop.

<400> 36

ccaatgcata cggcgagac gg

22

<210> 37

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

(Delta)DE2A.BamHI.

<400> 37

gaggtggatc ccatggacga g

21

<210> 38

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer Ad101

<400> 38

tgattcacat cggtcagtgc

20

<210> 39

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide NY-up.

<400> 39

cgacatatgt agatgcatta gtttgtgta tgtttcaacg tg

42

<210> 40

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide NY-down.

<400> 40

ggagaccact gccatggt

18

<210> 41

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonulceotide (Delta)Dhex1 used in PCR
amplification of hexon flanking sequences.

<400> 41

cctggtgctg ccaacagc

18

<210> 42

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide (Delta)Dhex2 used in PCR
amplification of hexon flanking sequences.

<400> 42

ccggatccac tagtggaag cgggcgcgcg

30

<210> 43

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide (Delta)Dhex3 used in PCR
amplification of hexon flanking sequences.

<400> 43

ccggatccaa ttgagaagca agcaacatca acaac

35

<210> 44

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide (Delta)Dhex4 used in PCR
amplification of hexon flanking sequences.

<400> 44

gagaagggca tggaggct

18

<210> 45

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer DP5-F.

<400> 45

ctgttgctgc tgctaatagc

20

<210> 46

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer DP5-R.

<400> 46

cgcggtatcct gtacaactaa ggggaatata ag

32

<210> 47

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer DP3-F

<400> 47

cgcggtatccc ttaaggcaag catgtccatc ctt

33

<210> 48

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer DP3-3R

<400> 48

aaaacacggtt ttacgcgtcg acctttc

27

<210> 49

<211> 12

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide used to create a double stranded
linker.

<400> 49

aattgcggcc gc

12

<210> 50

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer Ea-1.

<400> 50

cgtgtagtgt atttataccc g

21

<210> 51

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer Ea-2.

<400> 51

tcgtcactgg gtggaaagcc a

21

<210> 52

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer Ea-3.

<400> 52

tacccgccgt cctaaaatgg c

21

<210> 53

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer Ea-5.

<400> 53

tggacttgag ctgtaaacgc

20

<210> 54

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer Ep-2.

<400> 54

gcttccatgg aggtcagatg t

21

<210> 55

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer Eb-1.

<400> 55

gcttgagccc gagacatgtc

20

<210> 56

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer Eb-2.

<400> 56

cccctcgagc tcaatctgta tctt

24

<210> 57

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer SV40-1.

<400> 57

gggggatccg aacttggtta ttgcagc

27

<210> 58

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer SV40-2.

<400> 58

gggagatcta gacatgataa gatac

25

0933203-051499
664790-E082EE60

<210> 59

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer Ad5-1.

<400> 59

gggagatctg tactgaaatg tgtgggc

27

<210> 60

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer Ad5-2.

<400> 60

ggaggetgca gtctccaacg gcgt

24

<210> 61

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer ITR1.

<400> 61

gggggatacct caaatcgta cttccgt

27

<210> 62

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer ITR2.

<400> 62

ggggtctaga catcatcaat aatatac

27

<210> 63

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

PCR/MLP1.

<400> 63

ggcgaattcg tcgacatcat caataatata cc

32

<210> 64

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

PCR/MLP2.

<400> 64

ggcgaattcg gtaccatcat caataatata cc

32

<210> 65

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

PCR/MLP3.

<400> 65

ctgtgtacac cggcgca

17

<210> 66

<211> 49

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

HP/asp1.

<400> 66

gtacactgac ctagtgccgc ccgggaaagc ccgggcggca ctaggtcag

49

<210> 67

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

HP/asp2.

<400> 67

gtacctgacc tagtgccgcc cgggctttgc ccgggcggca ctaggtcagt

50

<210> 68

<211> 55

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

HP/clal.

<400> 68

gtacattgac ctagtgccgc ccgggcaaag cccgggcggc actaggtcaa tcgat

55

<210> 69

<211> 54

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

HP/cia2.

<400> 69

gtacatcgat tgacctagt cgcgccgggt ttgcccgggc ggcactaggt caat

54

0332303-051499
664750" E082EE60